

A mobile node moves from a first IP (Internet Protocol) network to a second IP network in a network system in which the first IP network capable of executing communication in accordance with both first and second kinds of IPs and the second IP network capable of executing communication in accordance with only the first kind of IP are connected with each other. When the mobile node communicates a message with other nodes on the first network after its movement accordance with the second kind of IP, a header for the movement containing both home and foreign addresses of the first kind in IP is added to a header containing home and foreign addresses in the second kind of IP, and put to the message, is added. The message to which the movement header is thus added is used for the communication between a first mobile agent on the first network and a second mobile agent on the second network, or between the mobile node and the first mobile agent.